

Serial No.: 10/040,072
Atty. Docket: BW-419-2

Title: Method and Device for Supplying a Flowable Medium to the Tobacco of a Smoking Product

REMARKS

Reconsideration of the pending application is respectfully requested. After entry of the enclosed amendment, claims 11, 13, 15, 17-20, 22, and 26-33 remain in the pending application. Claims 23-25 were previously canceled in the Preliminary Amendment. Claims 1-10 were canceled in a prior Restriction Requirement. Please cancel claims 12, 14, 16, and 21. Claims 11, 13, 15, 17-19, 22, 26, and 30-33 have been amended to more clearly define Applicant's instant invention.

Election/Restrictions

Applicant's attorney canceled claims 1-10 in a Response to Restriction Requirement. The Examiner states that Applicant's election without traverse of the Written Restriction in Paper No. 6 is acknowledged.

Oath/Declaration

The Examiner states that Applicant's oath/declaration is defective because the title is not on the declaration. A new oath/declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date will be provided pursuant to MPEP §§602.01 and 602.02.

Objection of Claims 16 and 22

The Examiner states that claim 16 is objected to because "inserting" should be changed to "inserted" in line 3. Claim 16 has been canceled, rendering this ground of objection moot.

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The Examiner states that claim 22 is objected to because "using" should be changed to

"by" in line 2. Claim 22 has been amended to reflect the suggested change, and Applicant's attorney respectfully requests withdrawal of this objection.

35 U.S.C. § 112(2) Rejection of Claim 11

The Examiner has rejected claim 11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended claim 11, the rejected claim rendering this ground of rejection moot. Accordingly, Applicant submits that the amended claim 11 now complies with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 112(2) Rejection of Claim 18

The Examiner has rejected claim 18 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended claim 18, the rejected claim rendering this ground of rejection moot. Accordingly, Applicant submits that the amended claim 18 now complies with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 112(2) Rejection of Claim 21

The Examiner has rejected claim 21 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 21 has been canceled, rendering this ground of

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rejection moot.

35 U.S.C. § 112(2) Rejection of Claim 27

The Examiner has rejected claim 27 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses this ground of rejection. Claim 27 directly depends from claim 26, which provides proper antecedent basis for "said carrier drum" in line 5 of claim 26. Also, claim 26 provides proper antecedent basis for "said application body" in line 3 of claim 26. Accordingly, Applicant submits that claim 27 complies with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 112(2) Rejection of Claim 29

The Examiner has rejected claim 29 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses this ground of rejection. Claim 29 indirectly depends from claim 26, which provides proper antecedent basis for "said application body" in line 3 of claim 26. Accordingly, Applicant submits that claim 29 complies with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 112(2) Rejection of Claim 31

The Examiner has rejected claim 31 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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Applicant regards as the invention. Applicant has amended claim 31, the rejected claim rendering this ground of rejection moot. Accordingly, Applicant submits that the amended claim 31 now complies with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 112(2) Rejection of Claims 17, 26, 30, 32, and 33

The Examiner has rejected claims 17, 26, 30, 32, and 33 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended claims 17, 26, 30, 32, and 33, the rejected claim rendering said grounds of rejection moot. Accordingly, Applicant submits that the amended claims 17, 26, 30, 32, and 33 now comply with 35 U.S.C. §112, second paragraph, and therefore respectfully requests withdrawal of this rejection.

35 U.S.C. § 102(b) Rejection of Claims 11-14

The Examiner has rejected claims 11-14 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,545,453, issued to Hoffman. The Examiner states that Hoffman discloses all that is recited in the claims, and that, while the fluted cylinder 26 of Hoffman's invention may not be specifically cited as that used in a cigarette machine or a filter assembler, the structure of the cylinder is such that it is inherently capable of use in such a machine/assembler. Applicant's attorney respectfully traverses this ground of rejection.

Applicant's invention is a device for inserting a medium, such as flavoring, into the tobacco portion of a cigarette rod. The device comprises a drum upon which the rod is held in place by a filter assembler, and a hollow mandrel which introduces the medium into the

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cigarette rod by insertion into the tobacco part of the rod and discharging the medium as the hollow mandrel is withdrawn. The hollow mandrel slides axially when being inserted into the cigarette rod, and the axial movement moves the hollow mandrel at a uniform speed as the hollow mandrel is being removed, so as to allow uniform distribution of the medium over the cigarette rod.

MPEP §2142 states that in order to anticipate, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." Richard v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed.Cir.1989). Hoffman fails to anticipate claims 11-14, and these claims are believed to overcome the Examiner's instant rejection.

Applicant's invention is distinguishable over Hoffman under 35 U.S.C. §102. Hoffman teaches a power cylinder 40 which is air-operated from a compressed air supply. This compressed air supply is connected to a valve 42 through lines 46, 48 and 50 which are connected to the power (air) cylinder 40 having a piston head 41 and a piston rod 43. Located at the free end of the piston rod 43 is a hypodermic needle 56, the device to inject the medium. The valve 42 directs compressed air into a line 50, moving the piston head 41 and the piston rod 43 forward, forcing fluid into the hollow part of the hypodermic needle 56 and ejecting the medium into the cigar during its forward thrust. The forward movement of the piston head 41 and the piston 43 occur simultaneously with the injection of the fluid into the cigar. Applicant's invention, in contrast, does not utilize compressed air to move the hollow mandrel forward or to eject the medium. Applicant's invention is not designed to simultaneously inject a medium during the forward movement of the hollow mandrel.

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Applicant's invention teaches a structure designed to move the hollow mandrel 16 via axial movement, *not* a movement via compressed air whereby the medium is simultaneously ejected. The axial movement means has a sliding part 6 on which the hollow mandrel 16 may slide axially when being inserted into or extracted from the rod, wherein the axial movement is generated via an inclined plate 9, in particular a cam plate, on which a running bearing 7, 8 connected to the sliding part 6 runs off.

Additionally, Applicant's invention teaches a hollow mandrel 16 that discharges the medium, supplied by a pump, while it is being slowly withdrawn from the cigarette rod. In contrast, Hoffman teaches a hypodermic needle 56 that is designed to eject the fluid mixture into the cigar during its forward "thrust."

These distinctions are claimed in Applicant's invention, and are submitted to be of patentable merit under 35 U.S.C. §103 or §102. Applicant's design moves the hollow mandrel 16 via axial movement, and is an improvement because the rotational movement of the drum 1 may be harnessed using simpler means, and translated into an axial movement for the hollow mandrel. Also, Applicant's invention is an improvement because a rapid insertion and a slower extraction of the hollow mandrel 16 ensures a more uniform introduction of medium into the cigarette. The term "thrust" connotes a quick and forcible forward movement. Hoffman's design to inject the medium during a forward thrust could disrupt the integrity of the tobacco inside the rod, a very undesirable consequence, whereas Applicant's design to slowly inject the medium during the retraction of the hollow mandrel evenly distributes the medium throughout the tobacco over the length of the rod and it lessens the

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possibility of destruction of the cigarette rod.

Since Applicant's attorney asserts that the Examiner's cited reference fails to provide every element of claims 11-14 of the instant invention, the Hoffman reference fails to anticipate the instant invention. Since claim 11 is believed to be allowable, claim 13, which depends from claim 11, is believed to be allowable. Claims 12 and 14 have been canceled. Applicant's attorney respectfully requests this ground of rejection be withdrawn.

35 U.S.C. § 103(a) Rejection of Claim 21

The Examiner has rejected claim 21 under 35 U.S.C. §103(a) as being obvious over Hoffman (U.S. Patent No. 3,545,453). Applicant's attorney has canceled claim 21, rendering this ground of rejection moot.

35 U.S.C. § 103(a) Rejection of Claims 17-18

The Examiner has rejected claims 17-18 as being obvious over Hoffman (U.S. Patent No. 3,545,453) in view of Alm (U.S. Patent No. 2,250,452). Applicant's attorney has amended claims 17 and 18, rendering said grounds of rejection moot.

Regarding claim 17, the Examiner alleges that, while Hoffman may not specifically articulate a rotating means to provide the needle having screw-like outer grooves with auto-rotation when feeding a flowable medium, Alm discloses that it is well-known to pierce cigars by reciprocating or rotary needles. The Examiner further alleges that one having ordinary skill in the art would have obviously been motivated to provide the needle of Hoffman with rotary movement in order to facilitate the insertion of the needle into the end of the cigar. The Examiner also alleges that Alm does disclose needles utilized in its invention that pierce

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cigars by drilling using sharpened cutting edges, and that it is known that "screw-like grooves"

facilitate in the insertion of the drill into the receiver.

MPEP §2124 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant's invention teaches a hollow mandrel with outer grooves that rotate in opposing directions when the hollow mandrel is inserted and removed into the cigarette rod. Hoffman does not teach a hypodermic needle with outer grooves that rotate in opposing directions when the hypodermic needle is inserted and withdrawn from the rod. Although Alm does teach the use of rotary, tubular drills, Alm does not teach a tubular drill that rotates in one direction during insertion, and rotates in the opposing direction during withdrawal, as does Applicant's claimed invention. As such, Applicant's invention, as defined by amended claim 17, comprises much more than merely combining Hoffman with Alm. Specifically, Applicant's attorney has amended claim 17 to claim a hollow mandrel with outer grooves that rotate in one direction during insertion into the rod, and rotation in an opposing direction during withdrawal of the hollow mandrel. The opposing rotation during insertion and withdrawal is an improvement because it prevents a rimming effect. This limitation is not

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Title: Method and Device for Supplying a Flowable Medium to the Tobacco of a Smoking Product taught or suggested by either reference, individually or in combination. Thus, Applicant submits that claim 17 clearly recites novel subject matter which distinguishes over any possible combination of Hoffman and Alm. As such, Applicant's attorney believes claim 17 to be allowable. Since claim 17 is believed to be allowable, claim 18, which depends from claim 17, is also believed to be allowable. Applicant's attorney therefore respectfully requests this ground of rejection withdrawn.

Regarding claim 18, the Examiner alleges that Alm discloses how the hollow drills of its invention are mounted to enable rotation and that this corresponds to the limitations of Applicant's claim 18. Applicant's attorney has amended claim 18, rendering this ground of rejection moot.

Claim 18 is dependent on claim 17, and therefore has all the limitations of claim 17, including auto-rotation in opposing directions. Alm does not teach a device providing the same rotational movement as in Applicant's invention. Referring to FIG. 3 of Applicant's invention, the carrier drum 5 is a carrier for the application bodies 10. The application bodies have a toothed wheel 11, and as the drum rotates, the toothed wheel 11 runs off on a fixed outer tooth meshing 12, such that the application bodies 10 auto-rotate in the direction of "a", inserting the hollow mandrel 16 into the cigarette rod. An inner tooth meshing 13 causes the application body 10 to then rotated in direction "b", the opposite direction, whereby the hollow mandrel 16 is retracted from the cigarette rod. Alm does not teach such interaction of tooth meshings 12, 13 respective to toothed wheels 11 which axially rotate the hollow mandrel 16. Claim 18 as amended is therefore believed to be allowable, and Applicant's

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attorney respectfully requests this ground of rejection withdrawn.

35 U.S.C. § 103(a) Rejection of Claims 11-15 and 19-22

The Examiner has rejected claims 11-15 and 19-22 as being obvious over Kanki et al (U.S. Patent No. 3,837,378). Applicant's attorney has amended claim 11, rendering these grounds of rejection moot.

The Examiner alleges that Kanki discloses all that is recited in Applicant's claims, although Kanki's apparatus is not used for supplying a flowable medium to the tobacco rod of a smoking product.

MPEP §2124 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Kanki does not teach or suggest all the claim limitations, a requirement pursuant to MPEP §2124. The Examiner, therefore, has failed to make a *prima facie* showing of obviousness. Applicant's invention, as defined by amended claim 11, comprises much more than what Kanki teaches, and the Kanki reference fails to teach or suggest all the claim limitations.

First, Applicant's claim 11 as amended teaches a cigarette machine, specifically the

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filter assembler of a cigarette machine, as the means for holding the smoking product when introducing the tobacco. This limitation is not taught or suggested by the Kanki reference: Kanki teaches a rotary transport plate 12 to hold and transport the product to be filled (i.e., the ampoule in Kanki's invention). This limitation is important because the filter assembler of a cigarette machine comes late in the process, and introducing the medium very late in the course of production ensures that the smoking products are placed in their final packaging very soon after the flavor is supplied, such that the medium has less time to evaporate and a smaller quantity of tobacco medium is required. Applicant submits that his invention clearly recites unobvious subject matter which distinguishes over Kanki.

Second, Applicant's claim 11 as amended teaches a hollow mandrel 16 with a structure to allow discharge of the medium while the hollow mandrel is being withdrawn from the tobacco rod. This limitation is not taught or suggested by the Kanki reference: Kanki teaches the injection needle 66 being lowered to inject fluid into an ampoule and automatically raised only after the filling operation. (Col.8, Lines 21-23). This limitation is important particularly to tobacco processing because the discharge of the medium during withdrawal promotes uniform distribution of the medium throughout the tobacco rod. Applicant submits that his invention clearly recites unobvious subject matter which distinguishes over Kanki.

Third, Applicant's claim 11 as amended teaches a hollow mandrel with spiraled outer grooves, similar to a screw. This limitation is not taught or suggested by the Kanki reference: Kanki does not teach a needle with spiraled outer grooves. This limitation is important

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because the tobacco in the rod should not be disturbed, and the outer grooves work to prevent the movement of the tobacco rod in relation to the surrounding cigarette paper during insertion and extraction of the hollow mandrel. This is an unobvious improvement that would never have been considered by Kanki, because spiraled outer grooves would provide no use or benefit when filling an ampoule with a liquid. Applicant submits that his invention clearly recites unobvious subject matter which distinguishes over Kanki.

Fourth, Applicant's invention teaches a hollow mandrel that rotates in opposing directions during insertion and extraction of the hollow mandrel. This limitation is not taught or suggested by the Kanki reference: Kanki does not teach a needle that rotates about its own axis during insertion into the ampoule, much less opposing rotation about its own axis during extraction. Kanki teaches injection needles that rotate around the axis of the rotary transport plate 12, which is a vertical shaft 16. This limitation is important because it prevents a rimming effect of the tobacco, which could destroy the tobacco rod. Applicant submits that his invention clearly recites unobvious subject matter which distinguishes over Kanki.

Since claim 11 is believed to be allowable as amended, claims 13, 15, 19-20, and 22, which depend from claim 11 either directly or indirectly, are also believed to be allowable. Claims 12, 14, and 21 have been canceled. Applicant's attorney, therefore, respectfully requests this ground of rejection be withdrawn.

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Allowable Subject Matter

The Examiner states that claim 16 is objected to as being dependent upon a rejected base claim, and that the claim would be allowable if rewritten in independent form. Claim 16 has been canceled. Applicant therefore respectfully requests withdrawal of this objection.

The Examiner states that claims 26, 28, 30, 32 and 33 are allowed. Applicant's attorney appreciates this indication of allowable subject matter.

The Examiner states that claims 27, 29 and 31 are allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph, set forth in the Office Action. Claims 27 and 29 have proper antecedent basis, as explained above, and therefore comply with 35 U.S.C. §112, second paragraph. Claim 31 has been amended, as explained above, to comply with 35 U.S.C. §112. Claims 27, 29, and 31 are therefore rendered allowable.

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Conclusion

Applicant's attorney asserts that the instant application is in condition for allowance. Applicant's attorney, therefore, respectfully requests that the Examiner allow the pending claims. However, if the Examiner believes there are other unresolved issues in this case, Applicant's attorney of record would appreciate a call at (502) 584-1135.

Respectfully submitted,

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